

# User Groups and Trail Facilities

1. **Pedestrians:** This group includes a wide variety of people such as walkers, hikers, joggers, runners, people pushing baby strollers, bird watchers, etc. The average speed of this group is 3-7 mph. Most of this user group prefer a surface softer than asphalt to prevent knee, shin and foot injuries. A soft surface next to hard would accommodate these needs adequately. Trail facilities to be considered for this group might include benches, drinking fountains, restrooms, shelters and picnic areas.

	<u>Easiest</u>	<u>More Difficult</u>	<u>Most Difficult</u>
Maximum Grade	5%	7%	7-10%
Max. length at this grade.	100'	300'	500'

2. **Bicyclists:** There are essentially two types of cyclists: mountain cyclists and touring (road style) cyclists. Each has different equipment and different needs. Trails constructed for this group should take into consideration sight distances, trail width and clearances. Speed is also a factor with consideration for speeds of up to 30 mph possible. Trail support facilities should include bicycle racks and good signage outlining the connecting trails, on-street bike routes and protocol. Periodic rest areas, drinking fountains and restrooms are desirable.

	<u>Easiest</u>	<u>More Difficult</u>	<u>Most Difficult</u>
Maximum Grade	6%	12%	15%
Maximum Sustained Grade	7%	10%	15%
Length	100'	300'	500'
Turning Radius	20'	12'	6'

3. **Equestrian:** This user group prefers a soft surface of granular stone or dirt. If more than one user group will use this surface, a strong sub-base and subgrade should be used to prevent deterioration. Vertical clearance should be at least 10 feet and horizontal clearance 6 feet. Speeds average between 4-6 mph. Sight distance and right of way signs are important safety features. Trail support facilities should include parking and staging facilities at trailheads, restrooms, hitching posts, picnic areas, and horse watering facilities whether natural or faucet. Attention should be given to water crossings, bridging surfaces and widths.

	<u>Easiest</u>	<u>More Difficult</u>	<u>Most Difficult</u>
Maximum Grade	10%	20%	20%

Length	200'	300'	500'
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**4. Cross-Country Skiing / Snowshoeing:** Many multi-use trails used for bicycling, walking and horseback riding during warm weather months are suitable for cross-country skiing and snowshoeing in winter months. If trail grooming for track setting is to take place, trail clearance must be at least 14 feet wide. Trail support facilities for winter may lack restrooms and water. Otherwise, facilities would be the same as above.

	<u>Easiest</u>	<u>More Difficult</u>	<u>Most Difficult</u>
Maximum Single Climb (Elevation gain of single continuous climb)	35'	70'	140'
Elevation Differential (Lowest to highest point on trail)	100'	250'	500'
Total Climb (Sum of all elev. gains)	150'	400'	650'
Greatest sustained gradient (Over 300' trail distance)	7.50%	12%	17%

**5. Barrier Free:** All hard surface trails should be designed, where possible, in conformance with ADA standards.

	<u>Easiest</u>	<u>More Difficult</u>	<u>Most Difficult</u>
Width of Trail Tread			
one-way	4'	4'	3'
two-way	8'	8'	4'
Length	0-1/2 mile	1/2-1 1/2 miles	1 1/2 to 5 miles
Surface	Hard	Hard or fine crushed rock; solidly packed	Firm packed soft surface
Clearing Width and Type	6'-10'	6'-10'	4'-5'
Slope (grade) and Vertical Climb	1%-3% vertical climb up to 80'	3%-6% vertical climb up to 160'	6%-8% vertical climb up to 12%
Rest Stops	every 100'-150'	400'-500'	800'

6. **Other Users:** Recreation trends and trail features may bring other user groups onto trails. These may include skateboards, roller blades, fisherman, dog sleds, and others. The District reserves the right to change use or adjust uses based on recreational demands and new sports as they come on line.